

REMARKS/ARGUMENTS

Applicants would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe the subject matter which applicants regard as the invention.

Specification and claims 1, 3, 5, 7, 9, and 11 have been amended to correct typographical errors. The word "traverse" should be read as --transversely--. The amendment is supported by the original specification, for example, Figs. 1 and 2 of the specification.

Claims 4, 8 and 12 have been withdrawn as a result of the previous species election. Claims 1-3, 5-7 and 9-11 remain in this application for prosecution on the merits.

The Examiner states that claims 1, 5 and 9 are generic to each of the species embodied in claims 2, 3, 6, 7, 10, 11 and 4, 8, 12, each of which depend from claim 1, 5 or 9. Applicants respectfully submit that if claim(s) 1, 5 and/or 9 are allowed, each of its dependent non-elected claims will also be allowable (MPEP Section 806.04(d)).

In view of the species election, Applicants retain the right to present claims 4, 8 and 12 in one or more divisional applications.

Claims 1-3, 5-7 and 9-11 stand rejected under 35 U.S.C. 102(b) as being anticipated by Sato (European Patent Application Publication 0761371). The Examiner states that claim 12 is also rejected under 102(b). Applicants understand it as an error since claim 12 has been withdrawn as a result of the previous species election. For at least the following reasons, the Examiner's rejection is respectfully traversed. Sato does not describe each and every feature as recited in the claimed invention.

With regard to claims 1 and 5, Sato does not disclose a heating unit mounted into a mounting hole with a space maintained from the inner surface of a mounting hole as required in

claims 1 and 5. In Sato, heaters 6 and 7 are inserted to respective holes 3e and 3f (see column 4, lines 15-24, and Fig. 1 of Sato); however, Sato does not disclose a space between the inner surface of the hole and the heaters. To the contrary, the claimed heater is provided in a horn in a loose attaching state to prevent the contact pressure caused by expansion and/or contraction of the horn due to the temperature change (see page 20, lines 12-22 of specification). This space also prevents a damage to the heater because an ultrasonic vibration is not directly transmitted to the heater (page 20, line 23-page 21, line 2 of specification). Therefore, in the claimed invention, a constant mounting state can be always maintained by preventing fluctuation of the rigidity distribution of the entire horn, and the stable vibration characteristics can be realized. Because Sato does not disclose each and every feature set forth in claims 1 and 5, Sato does not anticipate claims 1 and 5.

With regard to claim 9, Sato does not disclose a rod shaped heating unit inserted into the first direction of a transversely elongated horn as required in claim 9. In Sato's embodiments 1-3, heaters are provided in holes penetrating an ultrasonic horn in lateral direction to the horn at the same distance from the bonding working portion in the center so that electric wires connected to the heaters may project toward outside from the holes and the holes may penetrate through the end of the horn (see Figs. 1 and 2 of Sato). In Sato's embodiments 4-11, a heater is provided at one end of the ultrasonic horn in lateral direction to the horn (see Figs. 5-9 of Sato). Therefore, none of Sato's embodiment discloses a rod shaped heating unit inserted into the first (longitudinal) direction of a transversely elongated horn as required in claim 9. Because Sato does not disclose each and every feature set forth in claim 9, Sato does not anticipate claim 9.

The remaining claims in this application depend directly or indirectly on claims 1, 5 or 9 and thus are patentable for at least the same reasons as the parent claim.

Furthermore, Sato does not disclose a vent part provided in the horn for preventing the

heat transferred to the vibrator as required in claims 2, 3, 6, 7, 10 and 11. In Sato, heaters 6 and 7 are inserted to respective holes 3e and 3f (see column 4, lines 15-24, and Fig. 1 of Sato), and there is no vent part provided between the heaters and a vibrator. Moreover, one of Sato's heater arrangements is designed as its end closed in order to increase its heat efficiency (see column 4, lines 37-44 Sato). To the contrary, in the claimed invention the vent part is provided to reduce the heat transferred to the vibrator because temperature increase of the vibrator causes fluctuation of vibration characteristics. With the claimed vent part provided between the heater and the vibrator, the highly efficient heating operation can be made while maintaining the stable vibration characteristics. Because Sato does not disclose each and every feature set forth in claims 2, 3, 6, 7, 10 and 11, Sato does not anticipate claims 2, 3, 6, 7, 10 and 11.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned agent to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 16-0820, our Order No. 36685.

Respectfully submitted,

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